

Working from home?

Acoustic-proof it



A year into the pandemic and working from home is now just a fact of life. But now it's time to up our acoustic game, move beyond simply remembering to unmute ourselves and get the best sound out of all day online meetings. FOCUS spoke with sound engineer Jamie Tinsley about how we can easily and affordably reduce miscommunication and up the sound game of the average flat or house in the age of endless Zoom, Webex and Teams.

After looking around for cheap solutions to acoustically treat rooms in a stylish manner, as I predicted, it's simply not that cheap. There are a few companies that specialise in treating office spaces with their unique designs, fun colours and shapes but they come at a price. I then started trying to calculate how I could offer up all these different options and varieties along with a consultation and installation fee, but then realised the price starts to escalate far too quickly for a domestic

home office space unless you want to treat a cinema room of course. So I came to the conclusion that writing up some DIY advice is the most cost-effective route.

The reality is that 'echoey/reverberant' rooms which ruin the intelligibility of speech when having video meetings is mostly caused by your voice reflecting off nearby hard flat surfaces and create a crazy noisy chaos all around you. The remedy is to have softer porous material on those hard walls to absorb and prevent those

reflections. Since it's just speech we are concerned with and not bass heavy speaker systems, it's mainly just the mid and high frequency range that needs absorbing, meaning the material doesn't need to be that thick to create a noticeable difference. So, the cheapest option is to simply have more soft furnishings in your room, such as carpets, pillows, curtains, cuddly toys and plants. But it most likely still won't be enough and you will want to look at what you can add to the walls.

Supplies for your new studio

I have found one company that prints images onto breathable, absorbing panels – a genius idea for those that don't want the treatment to be too noticeable. Check out gikacoustics.co.uk/product-category/acoustic-art-panels. For the eco-conscious plant lover, this company sells moss wall panels:

www.sound-zero.com/product-category/sustainable-eco.

For those that like cheaper plain block-coloured panels similar to what you might find in recording studios, check out www.gikacoustics.co.uk/product-category/acoustic-panels-6.

For those that like fun shapes and style, go to www.archiproducts.com/en/products/acoustic-wall-panels.

Lastly, for the grey foam you see everywhere if you're really on a budget, check out www.advancedacoustics-uk.com/collections/acoustic-foam-tiles.

You can search 'cheap acoustic foam' and find plenty of super cheap foam if you're not bothered what it looks like, but make sure it is fire retardant.





Shur Mic

So... where exactly do you put the foam for maximum effect?

Your first reflection points. If you imagine sound traveling in straight lines, the quickest route from your mouth to the microphone is a straight line drawn between your mouth and the microphone. The second fastest route is via a reflection point from your wall or ceiling from between your mouth and the mic, like bouncing a ball off the edge of a pool table, from mouth to wall to mic. These reflections can also cause destructive 'comb filtering', which is a topic I'll prepare for your bedtime reading. The quickest way to find this point is by sitting in your chair and having someone hold a flat mirror on the sidewalls and move it until you can see your microphone's reflection. This is the first place you put soft foam treatment, then mirrored on the other side and also ceiling if possible and any other large expanse of hard flat walls. There is also a strong reflection from the desk and screen you are sitting at but my next point should hopefully help with these.

So lastly, and most importantly, buy yourself a half decent cardioid (directional) microphone. This will block out most noise in the room from behind the mic, only focusing on what is in front of it (hopefully you). Place your mic as close as possible to you, definitely no further away

“Microphones built into laptops, screens and headsets are often omnidirectional, so they are picking up all the rooms reflections from every angle, a big no-no if you want to be heard clearly.”



Jamie Tinsley at one of his live gigs

than your screen, and aiming towards your mouth. It's amazing how quickly you can lose clarity when it's not pointing towards you. Microphones built into laptops, screens and headsets are often omnidirectional, so they are picking up all the room's reflections from every angle, a big no-no if you want to be heard clearly. With high-quality, USB-powered mics becoming so cheap these days and the clarity brought to your meetings, the return on investment is huge for the tiny price you pay.

My last pointer would be to keep your microphone out of any room corners. If you have larger speakers connected to your setup, keep those out of the corners, too. Bass builds up in the corners of rooms and placing mics or speakers in these positions will cause all kinds of 'woofy', low-end troubles.

Some microphones I would recommend are the Shure MV5-LTG Digital Condenser Microphone for USB and lighting, made by perhaps the world most recognised and famous mic manufacturer, and the Blue Microphones Yeti USB Microphone for recording and streaming on Mac and PC. And I'm sure that even the JEEMAK Condenser PC USB microphone, a very affordable option, would be a million times better than what is built in to your computer system.



Blue Mic plug 'n play



Jamie Tinsley is a touring live sound engineer who has worked with artists including Rag'n'Bone Man, Will Young, Two Door Cinema Club and Kylie Minogue. He built Burntwood Studio and most recently recorded Dua Lipa's Studio 2054 live stream. He has also co-founded and partnered with some extremely talented and creative people at www.afterlivemusic.com to record real and exciting live video performances for artists wanting online promotional material.

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